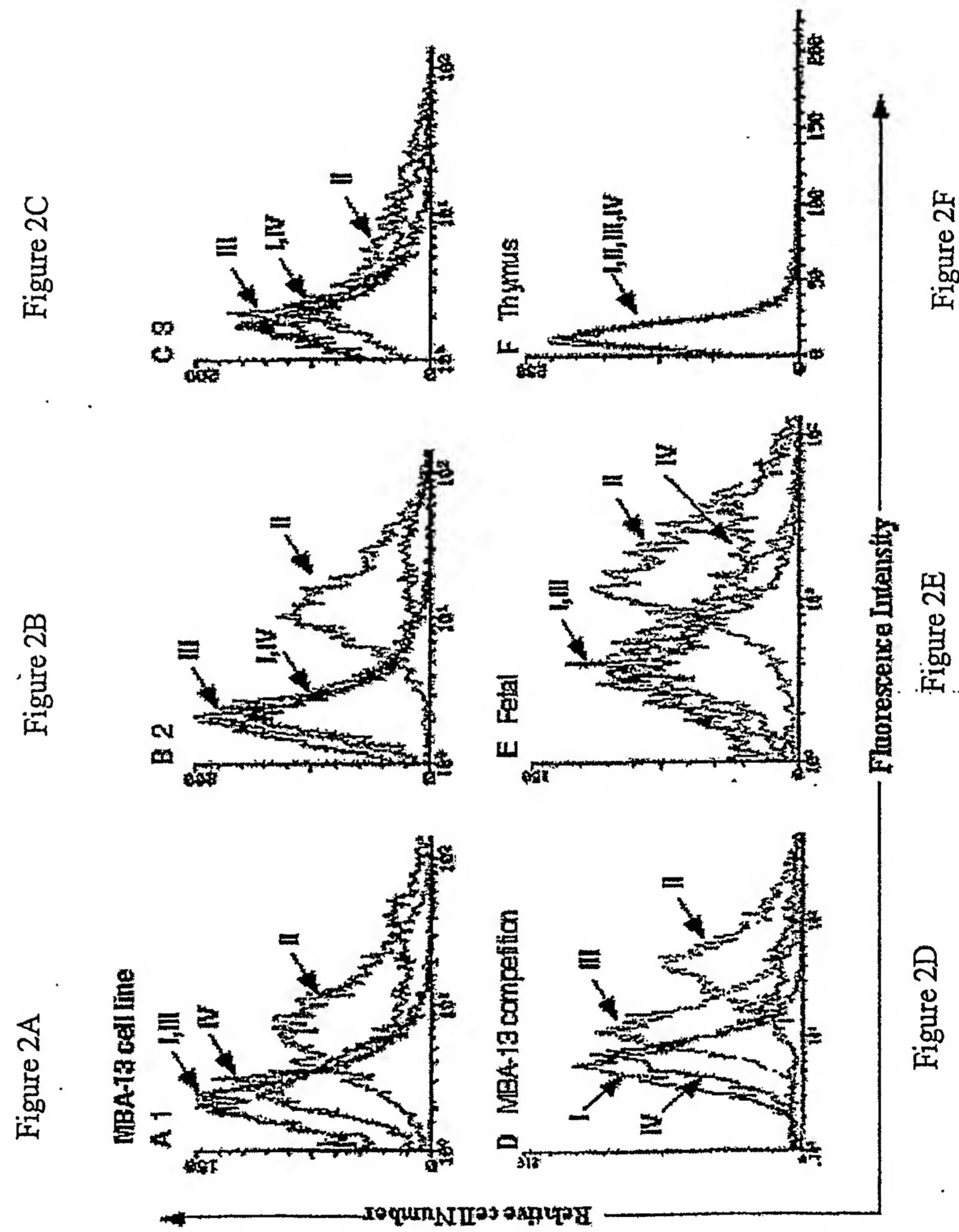


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Figure 1

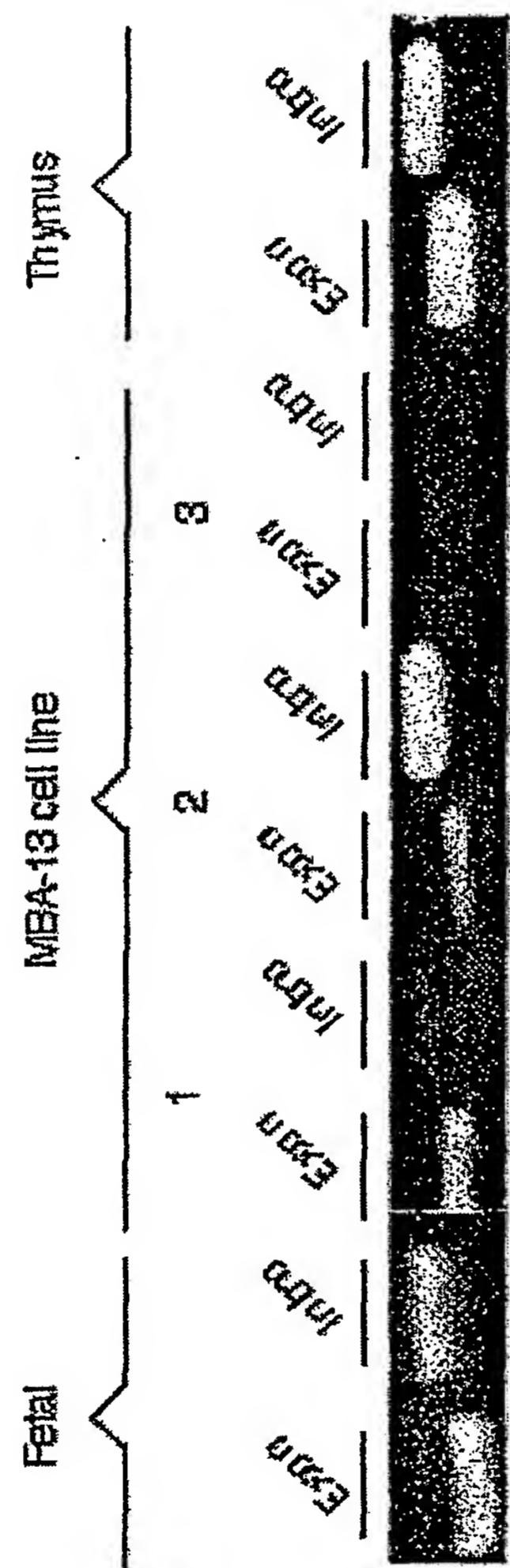
1 — Intron 5' to β 2.6 —
1 M G E Y L A E P R G F V C G V E P L 18
1 TTCCCTAAATGGGAGAATAACCTCGCTAACCCCGCGGGTTTGTGTGGGGTTGAGCCTC 60
19 C S Y E Q Y F G P G T R L T V L E D L R 38
61 TGTCCTCCTATGAACAGTACTTCGGTCCCCGGCACCAAGGCTCACGGTTTAGAGGATCTGA 120
39 N V T P P K V S L F E P S K A E I A N K 58
121 GAAATGTGACTCCACCCAAAGGTCTCCTTGTGAGCCATAAAAGCAGAGATTGCAAACA 180
59 Q K A T L V C L A R G F F P D H V E L S 78
181 AACAAAAAGCTACCCCTCGTGTGCTTGGCCAGGGCTCTTCCCTGACCACGTGGAGCTGA 240
79 W W V N G K E V H S G V S T D P Q A Y K 98
241 GCTGGTGGGTGAATGGCAAGGAGGTCCACACTGGGTCAAGCACGGACCCCTGAGGCCTACA 300
99 E S N Y S Y C L S S R L R V S A T F W K 118
301 AGGAGAGCAATTATAGCTACTGCCTGAGCACCCGCTGAGGGTCTCTGCTACCTTCTGGC 360
119 N P R N H F R C Q V Q F H G L S E E D K 138
361 ACAATCCTCGAAACCACTTCCGCTGCCAAGTGCAGTTCCATGGGCTTCAGAGGAGGACA 420
139 W P E G S P K P V T Q H I S A E A W G R 158
421 AGTGGCCAGAGGGCTCACCCAAACCTGTCACACAGAACATCAAGCAGAGGCCTGGGCC 480
159 A D C G I T S A S Y H Q G V L S A T I L 178
481 GAGCAGACTGTGGAATCACTTCAGCATCCTATCATCAGGGGTCTGTCTGCAACCATCC 540
179 Y E I L L G K A T L Y A V L V S G L V L 198
541 TCTATGAGATCCTACTGGGAAGGCCACCCATATGCTGTGCTGGTCAGTGGCCTGTC 600
199 M A M V K K K N S * 208
601 TGATGGCCATGGTCAAGAAAAAAATTCTGAGACAACTTTATGCACTCCTGAGCCGTT 660
661 CTTCACCCCTGGCCATAGATTTCTGCACCTTCTCTAATTCTGTTCTAAGAACTGTC 720
721 TCTTCTTCCTCCATGGATATCCATCCTCCTCGTTGACACCTTGACTCTGAAA 773

Figure 2



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Figure 3



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Figure 4

Sequences of intronic J β sequences containing Met:

(Met: bold; J β exon: italics)

J β 2.1 K G S R E V E P P F S P Y H V N H Q Q S I R T C M G N Y E L I K K H Stop V E
K Stop T L C G K E V T S P F S L E A T W T P T G S L Q I S N S L C Q T L S E
Stop M D I R S Q A K S G I S S S I Stop D R P H A R S R L P Y Q F W R Stop **M**
E N V S N P G S C I E E G E E R G R I L G S P F L L C N Y A E **Q** F F G P G T
R L T V L

J β 2.6 E L L G N C S G E F W G F W R L Y P E F P S R A L E R E A E Stop Q G D F P
Stop **M** G E Y L A E P R G F V C G V E P L C S Y E **Q** Y F G P G T R L T V L....

Sequences of intronic J α sequences containing Met:

J α TA31 V S K K K K K K S V T I L Stop N S E P A E G A I N S S L L G S L D P
G Stop N V L E H C T G L L P S P K D D P Stop C Q D R S S F L W G G G Q W I F A V I
V F C L A H S P R L W Stop P E T S P Q S T T Q E Q R V K G Stop L N
Stop G E R D I G H V R T R R N F T Q K K N C H L G R C Stop S V S M A E V T
P P P C P R L V S Q L R H G H Stop Q K G G F L S S L K T N L A E S H L P S S
P N E P V V S V D A L G S V R R V F A V A E G S R L T R R A R W G R T Y R G
W T E A S P C L H S S C A A Stop S S C G F Stop T G G R G G W G R G A I P K
A V A C F G I C S G L L C L P P W E R T H L A S R R L D V A G Q E D T G V G
G N S F R G E G E R G G R T V V E G V T G G S M S R M Stop S E Stop V K F K
K L E I K N K K Q G R G L Q K V Y R A G T V D F V M A W H T V A N Y G N E K
I T F G A G T K L T I K P....

J α TA46 Stop V F L P G R W E P K Stop E V D R D I S N P P C K P L V Stop L P T
V D T V Stop T I Stop R T L S H I D E G S D V V H T Stop E D S R D L S L V T V S D C
M P I V V H S R V Q Q T K D R D I K I R W T L S Stop P H L C N Q M I F T G S L A N
G C V A Stop S L T I S P L L S P W L S F G S L S L T Stop N L K Stop
S I Y Stop I I R F L G C I T H K K M T S R H I N I N P E E R G Q R A L S Q T
C S E L N L T T P C F N Q L A S A Y D Q L R Q R A T D R K W S S R H H L T R
A L Stop P H Q R Stop Y F R V Q E S F P Q A G W L E R G H G S A L R Q A M E
A G W E V Q H W V S D M E C L T V V T G S G G K L T L G A G T R L Q V N L...

Figure 4 cont.

J_αNew05 Stop V K D Stop G Y P K T K Stop V C G F A V L C S F G G C M S L P P R
 S L C I T L M G L C Stop L M K S G H S K D L D E E V I I I T A F F H Y Stop L R I Stop
 R S A Stop R Stop F I N V R L M F V L R Stop Y Stop K P N N S K I R L S
 S V T Stop T H I H T H S H T H I L T H W H N H T H T H T L S Q S H T H T H S
 H T S T I T H T L T Q P H T H S L S L S L S L S L S L S L P R Q
 C N C I W F P S R N G C C V C L T Stop D M Q S Y Q L V S W L G F C Y C Stop
 F S V K T L P V K E A W C Y Q P Stop S C H Y S N H I Y T Stop P F Y Y F I S
 L K L A Q L I R I Q C W G N K T S G F Stop S S S E Stop L H S Q L L V L R G
 C S K P S Q T L G T K A A R R K A S T R G E D D V A F L G L P L G P S C L L
 V I V R P Q M T V N S G G S N A K L T F G K G T K L S V K S....

J_αS58 W V Stop R F H V T A V A L C S F Stop T S L L H L F Stop L E T L G F R
 L S F L F K K Q S L Stop S K Stop Q D L L C L L S F H I V T K A G R I C S K L G L R L
 L A K V E W M Stop V Stop L V Y R K E R F V L L F F Stop P Stop Stop Y S
 K V K A T T V A S K V L Q A W S V L Q G E T W G N W L T F H G K T G M L F V
 V G L L L L L S S L S L S L K E T Stop Y N T F Stop L S G F E Stop L G I Q
 M C I T C S W Q G S R A V V L N L P N V V A P S P P K T I K L F C C Y F I A
 V T L L L Stop I G M Stop I S Y M Q L I Stop Y A T P V K G S L N P Q R R S
 A L Q D E S R C C R G R W S T V S N V R G A I E L G R N T M P T F E E K K N
 S S L G L E Q D Stop P L F L V S P L P L E K K P F I C N G L S R L M S F
 Stop M R F H V L T Stop Stop D S L G R R S L L P L Q V Stop Stop V F Stop D
 Stop V G N V N C T A K I R R A G I N S Q P L L M L S L Stop N R N Q I R M L
 S S V C V H T P P R A S Stop F D Stop C Q Stop L I Q I F R H L S E Q T S L G
 S L C L N Stop L S R Y L H N C Q I C F T L C C I D S A Stop Stop K Q M R L C
 F P R S F S P R R S S L P P S K Stop H L F T Q R E D V Q R V T Stop L I A A
 A S L H L Y D S L P W K R L K H F I R L I S Stop T D Stop Q P N Stop E E R N
 R F Stop A S F L W L Q F Q A T H L E H L V R H L R N T G A R R E V V S L C G
 L V F L S C T E N F T Q E E E S K Stop V E N Stop Q P G I H M Y T K Q S Stop
 A S A L S G S T V W F P H S P T P A P F I S N T Y I I L F S F S F E F L S A
 M P S H N P S T Y H C L S N P R M D G S G T G R V L F S G P S A E P L K K C
 R L Y P S S Stop V A T R R L G R G Q D E E K P Q E S G T A S L W Stop Y I R
 L N L L S G L K C F S F H L E P M C G S E E V F V V E S A T V A D R L C K C
 A D I W I W H K S H S M S T....

J_αNew06 K C V F S C S L G L E Q Y C S L H P Q I F S R R I Q C L A L Q T L P V
 Stop P L K G S Y S F F Stop K Stop H R R I P F N V A N C G G D Stop T A Q G P N L C S
 S L L Stop G Q L C L L S H R Stop T S E S G G L F P S L A F P V D E V V L
 S T N F I V K D T H D R Q L L P Y F S L N K F F L C Stop Stop L Stop Q H I S
 A N E F L V I Q I N S S V T Stop T V A S Y P I I Q N S L T H H S A A A H C A
 S S N P D L H A S S N K A K R M A C Y Q M Y F T G R K V D E P S E L G S G L
 E L S Y F H T G G S S Q A V G L F I E N M I S T S H G H F Q E M Q F S I W S
 F T V L Q I S A P G S H L V P E T E R A E G P G V F V E H D I T V S S N T N
 K V V F G T G T R L Q V L P....

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Figure 4 cont. (2)

JaNew08 Stop VMFHFLMF Stop NSLPLS Stop RCSECRVGKLVHMLG
HGGQHSCTGYSTAQPDTTSPPTGETAPTLPPDTKIFLIVYLI
Stop RAKGKIKKLCPESILKSPRSPPPYH Stop SPADCK
FNVIFGSY Stop K Stop Stop GFLCLMTPTVSLPSFIKGLLFC
VWPLLASWFCPHAPLCLFQGWAGDNSFKSHFDVTDNRD
KVLAKCNTAHGVFSRHTSQLFSSVQKHGSYLMMSAIY
SDTAKCSFKAGTRDFLWDLFLRLTMGWAFSGSSEMPSW
IPALPMEILWSG Stop TAKPDMFLYRLLQGLEIRTLREN
KSFG Stop MGRLLDGSIRKRND Stop QEERPKKNTGQALGW
GGVGMMSRKMVTVGIQEAGSLSS Stop EGKQGFL Stop LKVPS
QLSNLNQQGHLFPSPDFPVHVGMPPLPTMVC Stop EVGRG
IDQEYV Stop HS Stop GPLFKHETPESVRGAKSLGPRREMQ
QSNSSQQVWRSTEQDPVLALCLTPLASPDHTAHPSSFS
Stop PQESKVLDREPEIP Stop PGQVQKGWSGAQGWFLKTL
WISI Stop FLIYNKF Stop LS Stop VIRKMFL Stop TIPVKKG
DNIYRGPLLRCQFPPWASMWWGLILSASVKFLQRKEIL
CLPGTGSNRLTFGKGTKFSLIP...

JaLB2A Stop VIVTHPLC Stop IPPTRSIFALSSL Stop LGSLSNVVS
VTPCPYLLSRYKWSKQILGFH Stop HSETDNCVLDILQKEGFQS
KGSHYFY Stop LTHKEAGDNWKVPGEYLGQKADMAQCMHS
Stop KIP Stop LTFIEYLLYACVNAPCTLSHLRG Stop W
LWGRFYPTFKGKVEIVTKWLRENGGPS Stop TSSRPGCPH
CGLSQPGSC Stop GLYRMK Stop PVVLVTTSSVLSQ Stop P
Stop CL Stop EQGVR Stop DSLCFLSDTLKQNGEVHEQFHS
GSMVNGQ Stop TNLKRSSLWLES Stop PFSTPLSSLPTFLS
SWTFISGKPLHRCLC Stop Stop RSQIKN Stop ERLSPGHTKN
LRR Stop LFFQYLKNCSVNDNGR Stop HQRQNQKQ Stop MKRR
PSFSGMLLNGAVGGQAPL Stop SLESALQGLHSGSSGLRW
RALWKEFLWHFRLWISCELEVLRPHDPSIEDKRVGYIC
FFLFLLF Stop Stop PRNRPSNCSSQAEAYRDFTLRR Stop RT
MISQCSKGKRREREREREREREREREREREMP Stop
RRARG Stop TKEVG Stop LCRGQI Stop SIEVFISSALE Stop N
PSIM Stop VLVTEAVF Stop TGKQDQGSEGLPI Stop TLSKGC
VIAF Stop Stop ERTLAVERLLLPQIICLLRCSL Stop RKSDC
LP Stop LLGAWGKDLGKLRADRRSFSALHSQARERGWGMV
GADLCKGGWHCVDRGSALGRLHFGAGTQLIVIP...

Figure 4 cont. (3)

J_αDK1 Stop V CLFL WIPNLIHC Stop DKCKLFRHVSGVSTVPIH
 PDITGSKVPSHAFPVLTTRKTGSSLYCWQAQ Stop GSRLEDASD
 AQQPAWDCPGRESCSEMPSLPLGIIL Stop LSSPT Stop
 ARPCLSVAYSI PASHTCGCANILIEASGRS Stop GSSMLL
 F Stop GKASH Stop Stop SKAG Stop LDSPPKSLHIPGSGLQV
 QTTMLVFV Stop VLDMEPGACLQGKHFIG Stop AISLAHL
 PVSIFF Stop ERISW Stop YSHLVHRQKDDVDVPRWHTVIW
 SQALIFPPSIFRCLS VKVISSMSPGGRLACCPSSAVA
 WMASSCYPT Stop L Stop CIPIIH LTLYVYLLFPYS Stop MYC
 HATVMLFIVSSVSSVVP Stop TKIQRPNCLPCLKIIVLE
 KKLEFCCCLYRH Stop ELRSLAVARTGYDFCSV Stop LHTP
 Stop V Stop MREPVKNLQGLVSL CLPGRQSSDIWNRNHGIS
QP.....

J_αTA39 Stop VPDSW Stop L Stop RPPLSHSLYHTDDHMPYHSSKV
 ELGFNEERN Stop MLLVVAVLHPMSHSMFIITLITSSDKRKFTR
 RTVTIC Stop TLVKMKVSTGAGAYCNSGYQKDQALARKKLNK
 Stop Stop VDLVKLLQIFFKNQYVSELTGEYSAAILSGFSYSYGT
 VVEPCKRGFHGLNSMLS LYSSNQKGGIPSR
 TPKREES Stop MLITSI Stop DHSRLSIFVRQHGTTIYNVF
 IWGTRHH Stop RDA Stop Stop GC Stop DPLNLPQYL Stop GTVVK
 ELMVHADKHIPCMGKLSK Stop GCRTGCEQDRSCRNPRNN
 SSRRADPEERAQLKHIQVP Stop ICFDSCTGPALSVKRK
 CLIILHKLI Stop G Stop VNVCKNILQILKCYPHIKYGSIK
 QQKILKLGQS Stop TLLR Stop RDGVCGSVAATGTG Stop KH
 PLSLMEVYELRVTLMETGRERSHFVKTSLT **VQILGLTR**
GLELGQNSKSFQ.....

Figure 5**Homo sapiens beta gene segment****J β 2.3 (bases 198551 to 198627), containing [SEQ ID NO:17]**

*Met GLSAVGRTRAESGTAERAAPVFVLGLQAVSTDTQYFGPGTRLT
TVLEDLKNVFPPEVAVFEPSEAEISHTQKATLVCLATGFYPDH
VELSWWVNGKEVHSGVSTDTPQPLKEQPALNDSRYCLSSRL
RVSATFWQNPARNHFCQVQFYGLSENDEWTQDRAKPVTQIV
SAEAWGRADCGBTSESYQQGVLSATILYEILLGKATLYAVL
VSALVL Met A Met V K R K D S R G Stop*

Homo sapiens alpha gene segment**J α 2 (bases 84269 to 84334)**

L L F K Stop Stop V G P V S L C N G V T Y G *Met N T G G T I D K L T F G K G T H V F I I S...*

J α 3 (83376. To 83437), containing [SEQ ID NO:18]

L Q G I E A A Met Stop R E A H R P G E N L G S T L T G C F Q Stop S L H F L S S K
Met T I T T S Stop Stop Y E I Met A R Met Stop K V I N K Stop Stop L F Stop N I I I I I I
E A L L I L R F T L S Stop R E R R I A S L G N K R C K Q Q R P K E P F R *Met L L W D P S G F Q Q I S I K K V I S K T L P T V G V Q Q C F Q D N L W I R D Q T Q H P A...*

J α 6(79270 to 79331), containing [SEQ ID NO:19], [SEQ ID NO:20], [SEQ ID NO: 21]

Q L Q E K R H I K F P L L S V L A A L S E A P C I Stop L K S S R A R P S E C L P Q A
S R V W C L Y W G A G S R H G E L L P C F S A D G K V V F S P G Y T G A K E L S S
P Q P L A P A P G L Q H S G A L R T A V G D F L Q L R E Y S G G F P R *Met L P N T Met G Q L V E G G H Met K Q V L S K A V L T V C I R R K L H T Y I W K R N Q P Y C S S ...*

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Figure 5 cont.

J α 8(76346 to 76405), containing [SEQ ID NO:22]

S I H G H H S C K K H V Stop L T N S Stop V W Met V K L P Stop V L S R T E T L Stop
L Y Stop Stop L F Stop L E Y Stop Stop H F Y I T Q G I Q S R I F S W V L S D L L S S S
N G L R K I K V K Stop Stop D Stop Met P P T T L V H A C R H R N T L S N Stop L A C
D L A I L A Met A Q Stop Q G P I L Y R V *Met S E C E H R L S E T C I W N W H P T S*
G Q S...

J α 9(75756 to 75816), containing [SEQ ID NO:23]

Q Y N Stop S T R A Stop L L C E L Stop R N A G Stop R H F A H R T L A L R D S L K I S
S S P L F I F P I R K L R P R E V G Stop I V Stop G Q C E L G L G L E P G D P G P G A I
F C D C C L V N Stop T S D R Stop E V Stop V Met L I N R K N K Stop V L Q G E Y K N
V L L I T S T L V Stop A P Stop T C S P A V V Stop K W K E K E *Met A H F V A V Q I T*
V G N T G G F K T I F G A G T R L F V K A ...

J α 11(72705 to 72765), containing [SEQ ID NO:24]

V N S G Y S T L T F G K G T M L L V S P
E H C Y Stop S S D V W F Stop Q K N P N I A V I P L Stop K E Q G R G F F S E S S S
Stop D L S I L C Q S V L W I Q D T Y I F V S S A G P T C S A S D H L S L I C K Met R I
I F K L Met A Q L K P K Stop G S G I Y A D Y Stop S I W L I N E G F L S F S L C R S W
V E I P N T A N H F C *Met G I C Y S V N S G Y S T L T F G K G T M L L V S P*...

J α 13(71282 to 71342), containing [SEQ ID NO:25]

D Stop K I L E S Stop S Stop R K R Q K V W L S T S S S S D L A Stop L V N L G H S I F
I Y K Met K T F N I T S D F L F Stop F C G Y I I G V Y I Y F K D K L I Y V K V F C K F
L N A I H S E N I I C L Stop N K K N Y V R F R I L L T Stop E F V G S Stop Stop N S H L
H V I C S P R H W Stop K A L S L L K Y S G S N A T Q *Met K R A G E G K S F C K G*
R H Y S V N S G G Y Q K V T F G I G T K L Q V I P ...

J α 14(70532 to 70583), containing [SEQ ID NO:26]

S Y S Met L L K K F Stop L I E E R K I I Y K D Met S N L L N S G K Met R L C T G V D
S Stop V K Met G V R A A I L W L V K Q D Y L V K L C K S P R K K Stop V S E L S R
E Y H L D C S Q A F H Y I Y C T T Met V P Stop K E A F S G L I P W L S L Y S S I K K
G E S S Q S S H E G D S C *Met L T T L I Y Y Q G N S V I F V R Q H S A V I Y S T F I F G*
S G T R L S V K P ...

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Figure 5 cont (2)

J_α24(60203 to 60265), containing [SEQ ID NO:27]

K T S S Y L N D R A T V V I S C H L S S A E D W V Stop P Stop V N A Stop A G G F L S
L Q H L K R T P R L H Stop P Q Q S G F L P L P P G R C S S W H T P S L V S Stop K K
R N Stop K R K G E K L I S H I *Met Q L P H F V A R L F P H E Q F V F I Q Q L S S L G K*
P F C R G V C H S V T T D S W G K L Q F G A G T Q V V V T P ...

J_α25(59046 to 59105)

Q K D K A S P L S L G R G Q G C L S S Q
A Q A G G R K L Stop G V F A E P R N T V G I T *Met V R I L S L V P E P D C P C C P V*
S T V K W R Stop K *Met S P V L D V G R S C R V L R P G V H R D L R S G D G E E G*
Stop K R N E K Q N H K D N T E E G F I F G K E N H K A V Stop L T L E E *Met H S F G*
G S L L R R A L C R G K L S C Stop V F D A E I I T *Met Q K D K A S P L S L G R G Q*
G C L S S Q...

J_α31(51207 to 51263), containing [SEQ ID NO:28]

E L G W L C S W K I S L W V Stop E C T V P S N L C V Stop G Stop A H T Y D S K S C
Stop Q I R F S F G S F *Met P R N A K E F Stop K L I S L A F L K E T L F A L C C R A N*
F S S Y H K R P E T Q R K Q K K K R K K K K T Q G E S N C P L T T V L C V W Stop
G F T *Met G F S K G R K C C G N N N A R L Met F G D G T Q L V V K P ...*

J_α36(45351 to 45411), containing [SEQ ID NO:29]

K L G A V S L T C N L S I L E G Stop G R R I T Stop G Q E F K T T L G N T V R P P S L
Q K I N K Stop N F F K N S Q A W Stop H A P V I L A T E E V E A G G S L V P R R S R
L Q Stop A K N T P L H S S L D N K V R S C L Stop K Y I F K N I K Stop I S Stop R R R
K E *Met K K I W L S R K V F L Y W A E T L C Q T G A N N L F F G T G T R L T V I P*
...

J_α40(39930 to 39990), containing [SEQ ID NO:30], [SEQ ID NO:31], [SEQ ID NO:32], [SEQ ID NO:33]

N Y K I *Met S W V C L C G S Stop T G S R G E S Stop Met E Y F R G F N S H L D A Stop*
V L I C S L N Q T L Stop L I N Met H K D S Met R L K N F C K L G P N R S S E D F L Y
E L R Y N P K Stop I T C R K I R G Q G L S Met G K V H V Met P L L F Met E S K A A S I
N G N I Met L V Y V E T H N T V T T S G T Y K Y I F G T G T R L K V L A ...

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Figure 5 cont. (3)

J_α41(37899 to 37961), containing [SEQ ID NO:34], [SEQ ID NO:35]

QLLSL Stop YLPPTFTLEPHRIVSVHAPGCSQSRPARRSAGHRK
TPDFITCHRAPSLRWQISILITHITVGSGDLVSNGL *Met E EG SFI*
YTIKGPWMet THSLCDCCVIGFQTLALIGIIGEGTWWLLQGVFCL
GRTHCGTQIPGMHSTS AKA PR CWSHP...

J_α44(35064 to 35126), containing [SEQ ID NO:36]

LGPITHQV Stop QEGFIKIKPRNRKDKEFNSQCLQS Stop T Stop Q LL
SLNHLVSTP Stop PTEVKEGNQQV *Met LVK Stop V S G Q S Q L P S Stop E*
LILWSLGKGNA SVRAHPGCPSGRDHGESSE Stop GSEHQ *Met ES*
QATGFCYEASHSVNTGTASKLTFTGTGTRLQVTL...

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Figure 6

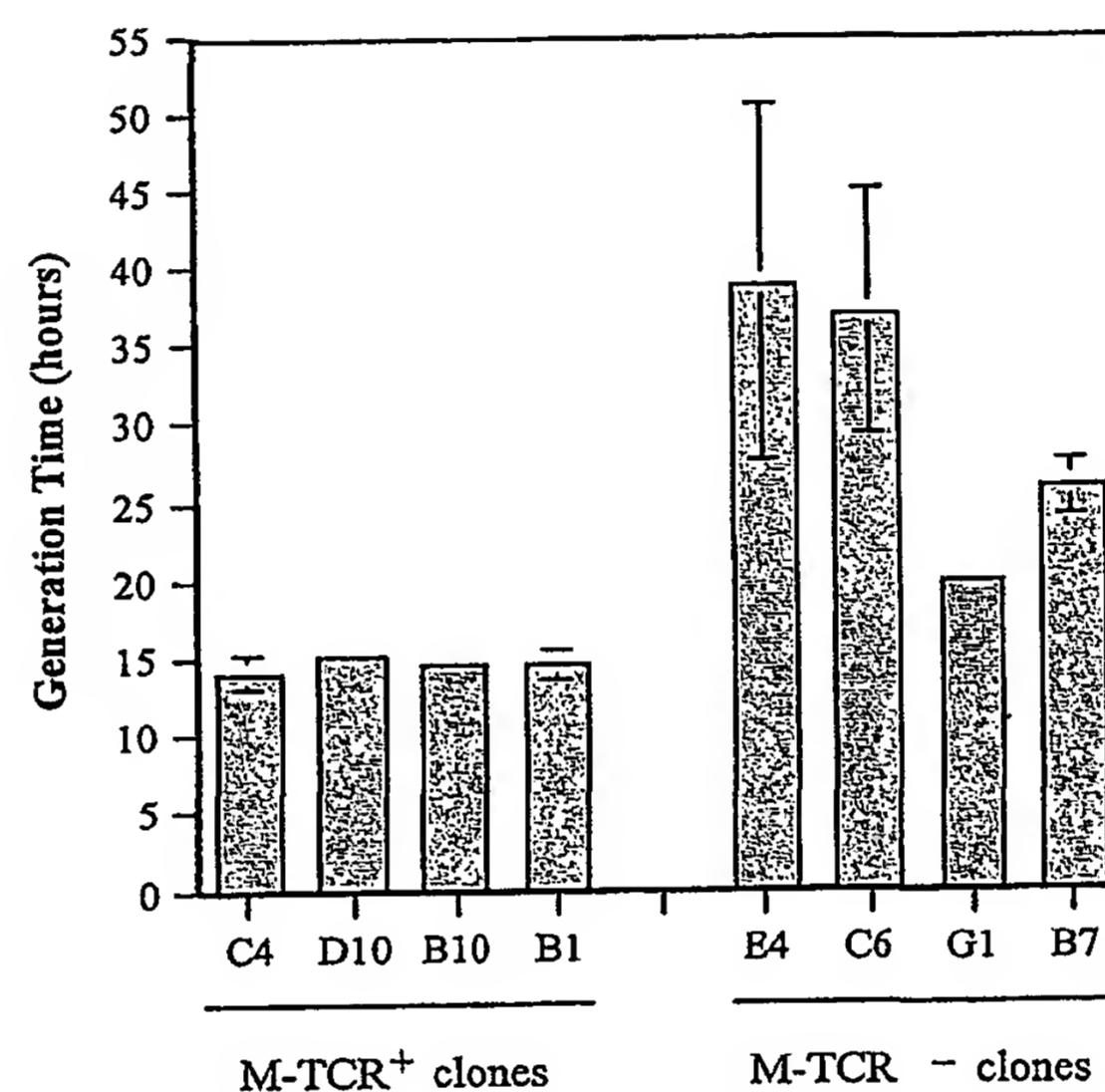


Figure 7

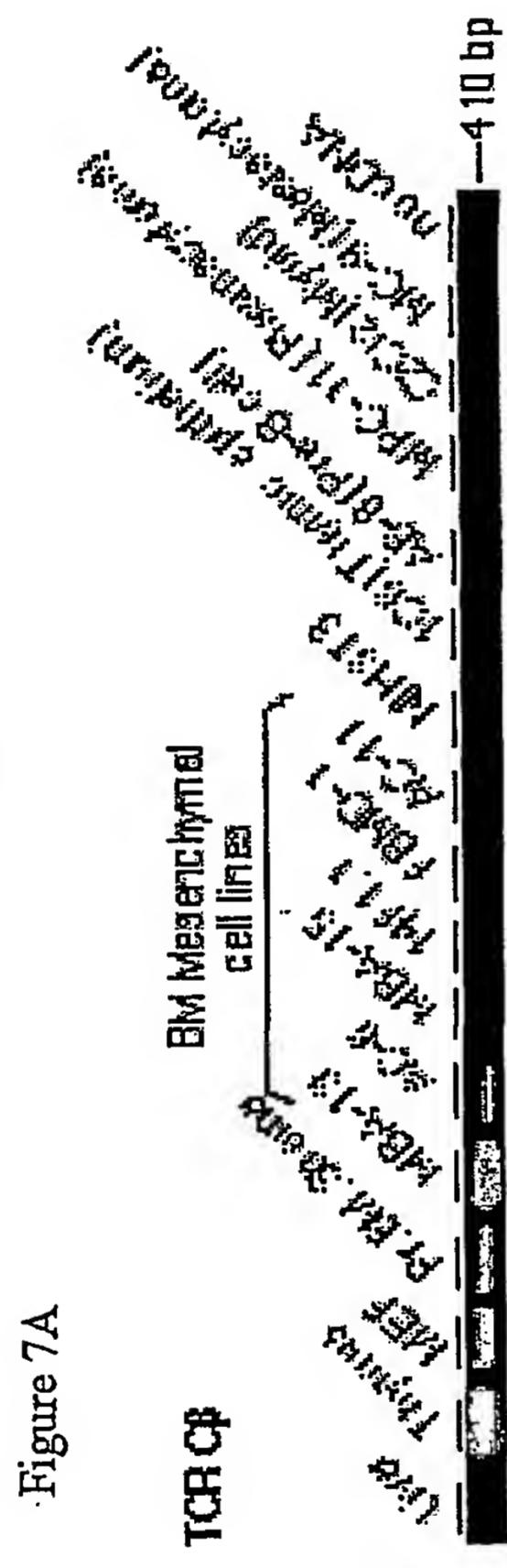


Figure 7A

Figure 7C



Figure 7B

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Figure 8

Figure 8A

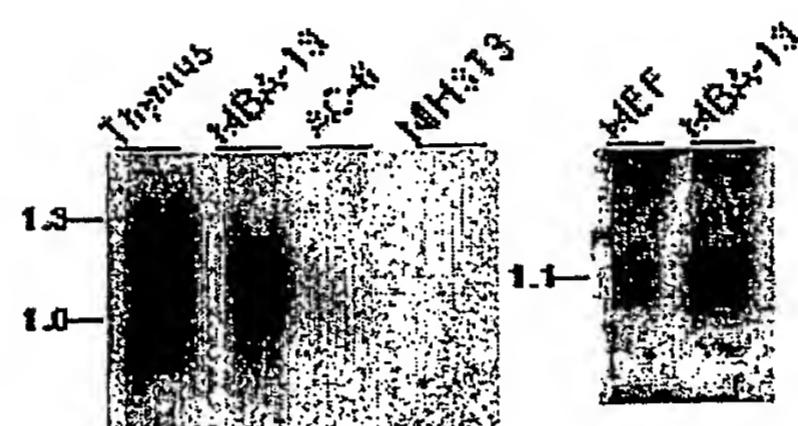


Figure 8B

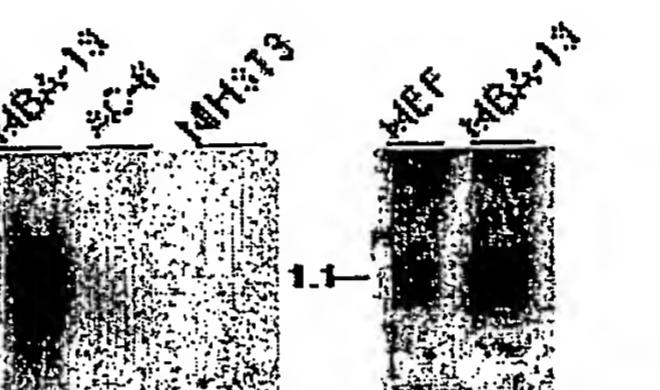


Figure 8C

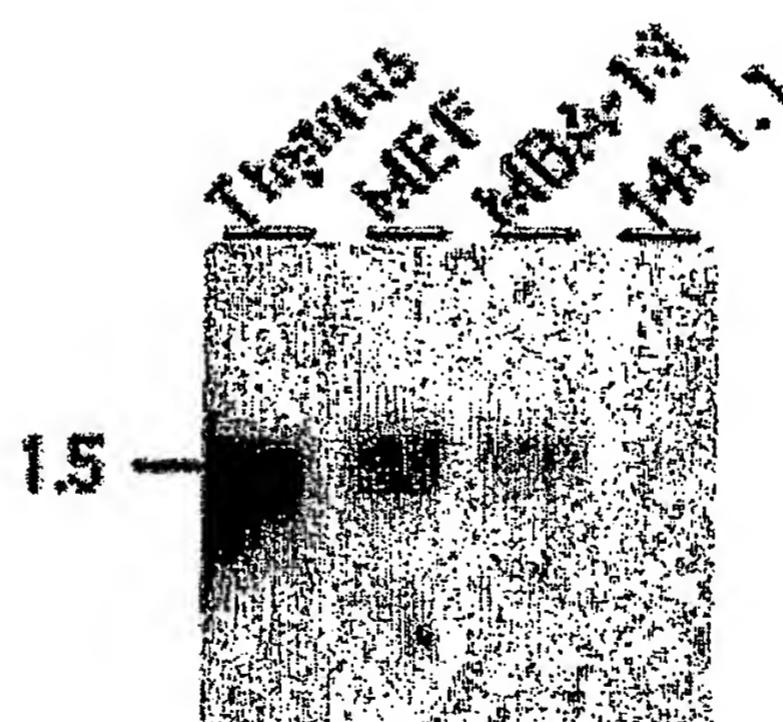
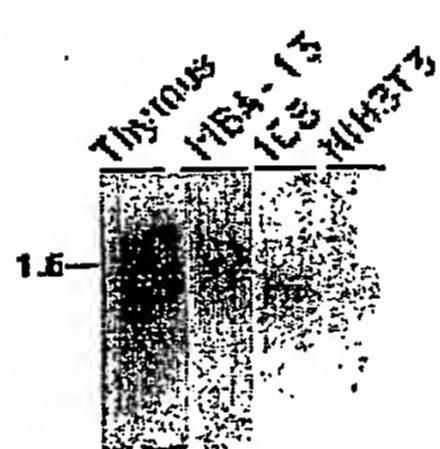
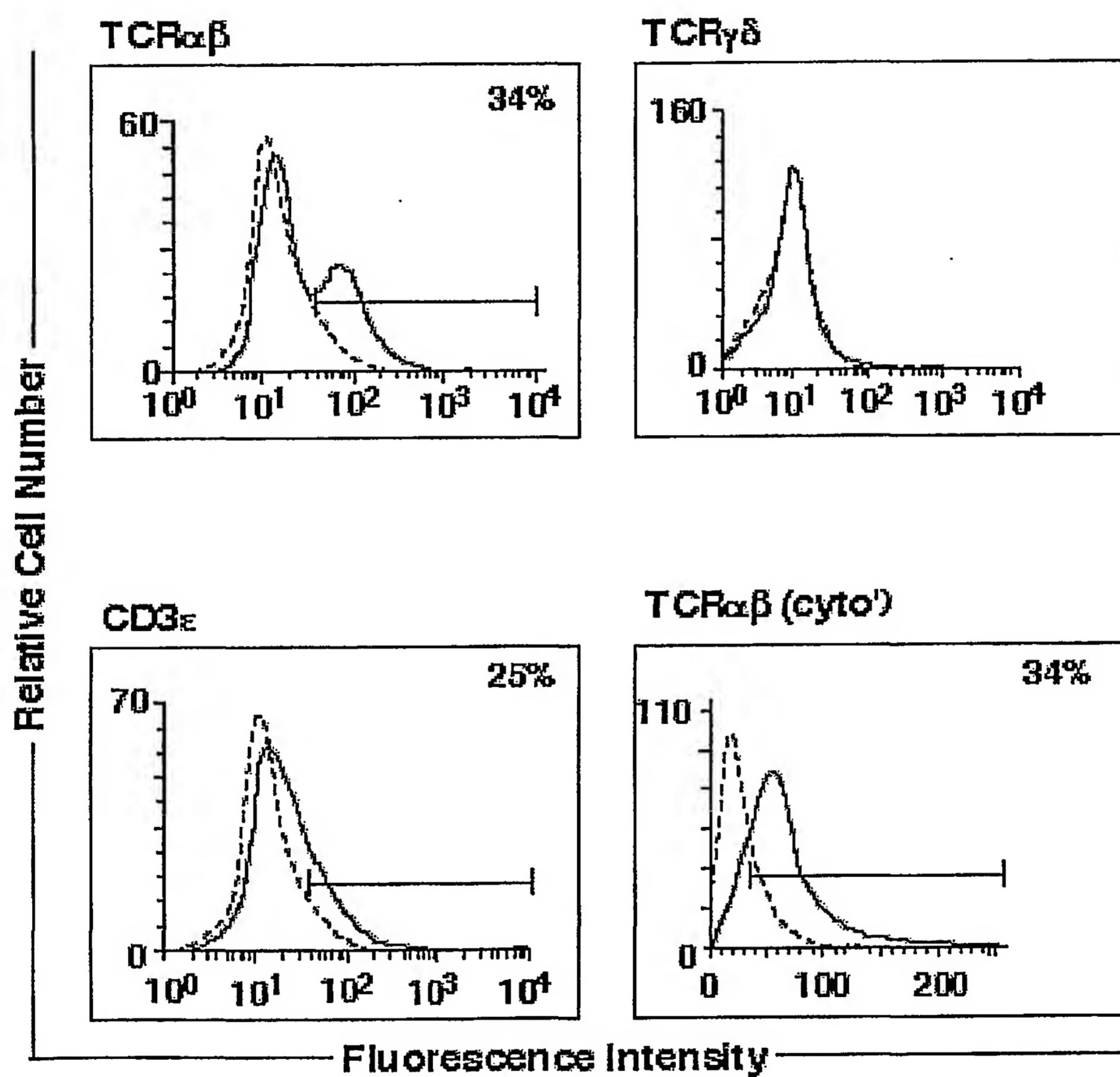


Figure 8D

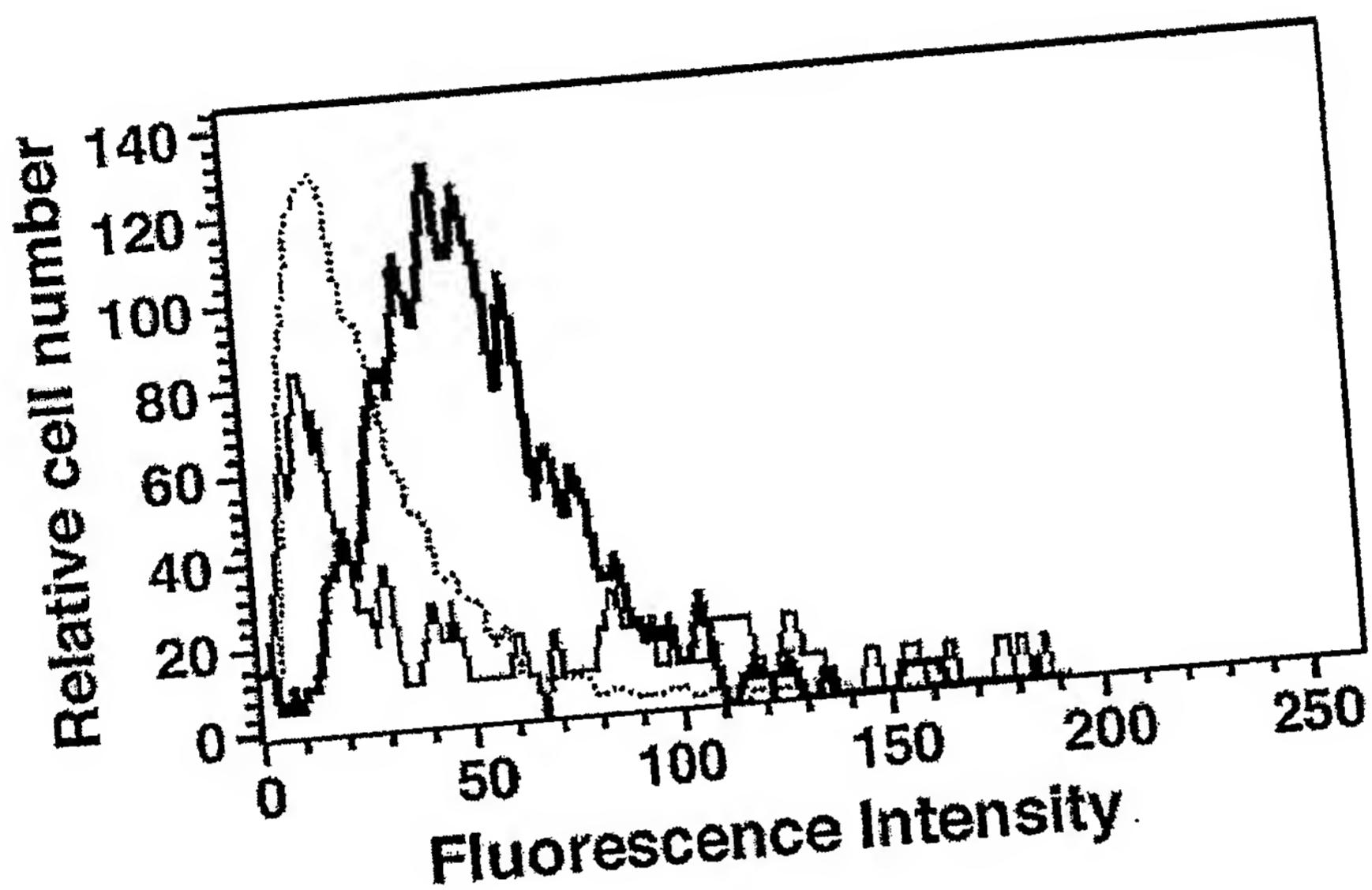
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Figure 9



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Figure 10



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Figure 11

Intron 5' to J β 2.3	J β 2.3	CB2
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Intron 5' to J β 2.3

1 atggggctctoagcggtgggaaggccccggatctggacacagcagagcgggcagca 60
 1 H G I S A F G R T R A E S G T A E R A A 20

J β 2.3

61 ccggttttgtcctgggcctccaggatgtggccacagatacggatattttggaccaggc 120
 21 P F F F L G I Q A F S T D T Q Y F G P G 40

C β 2

121 acccggtgacagtgtcgaggaccctgaaaaacgtgttcccaaccggaggtcgtgtgttt 180
 41 T R L T V L E I I L K N V F P P E V A V F 60

181 gagccatcagaagcagagatctaccacccaaaggccacactggtgtgactggccaca 240
 61 E P S E A E I S H T Q K A T L V C L A T 80

241 ggcttctacccgaccacgtggagctgagctgggtggatgggaaggagggtgcacagt 300
 81 G F Y P D H V E L S W W V N G K E V H S 100

301 ggggtcagcacagacccgtggccctcaaggaggccggccctcaatgactccagatac 360
 101 G V S T D F Q P L K E Q P A L N D S R Y 120

361 tgcctgagcagccgcctggggcttcggccaccccttotggcagaaccggccaccactc 420
 121 C L S S R L R V S A T F W Q N P R N H F 140

421 cgctgtcaagtccagttctacgggtctcaggagatgacgagtggtggaccaggatggggcc 480
 141 R C Q V Q F Y G L S E N D E W T Q D R A 160

481 aaaccgtcacccagatcgtagccggccggccctgggttagaggcagactgtggcttcacc 540
 161 K P V T Q I V S A E A W G R A D C G F T 180

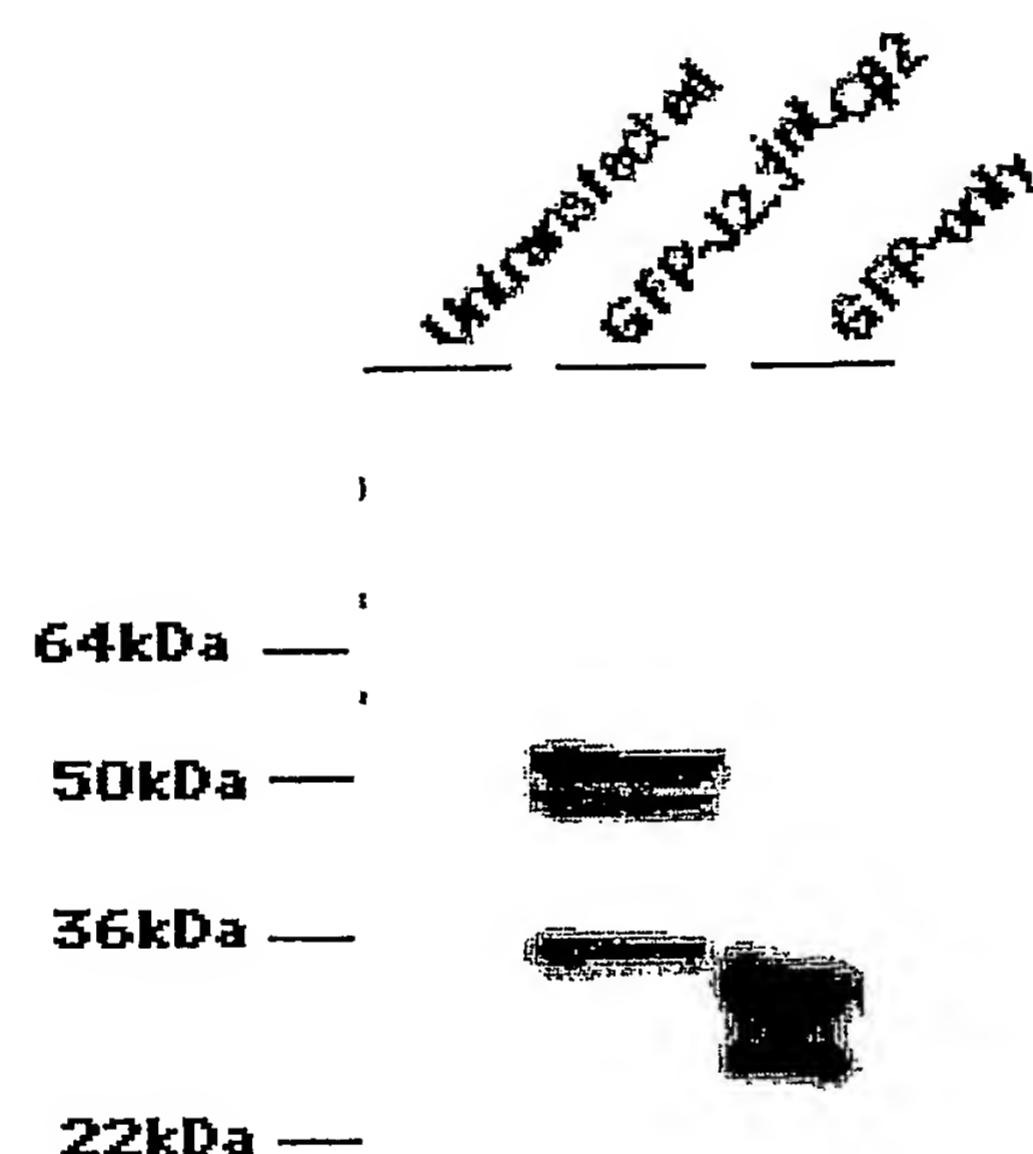
541 tccgagtcttacccagccagggtctgtctggccaccatctatgagatcttgcctgggg 600
 181 S E S V Q Q G V L S A T I L Y E I L L G 200

601 aaggccacccctgtatgcctgtggatggccctcgatggccatggtcacagaga 660
 201 K A T L V A V L V S A L V L M A M V K R 220

661 aaggattccagaggctag 678
 221 K D S R G * 225

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Figure 12



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Figure 13

Figure 13A

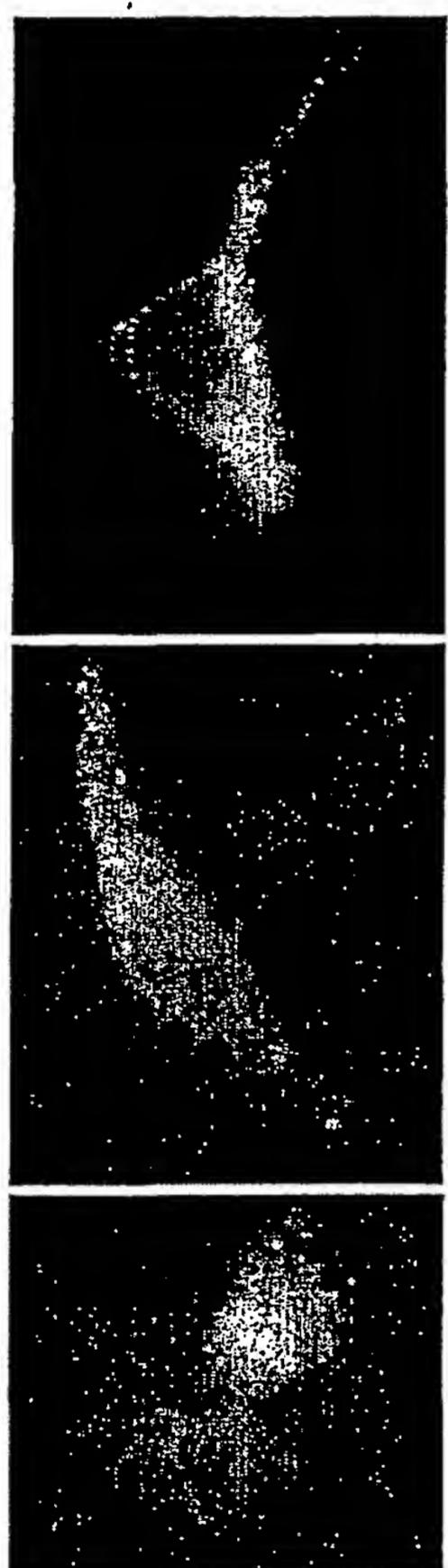


Figure 13B

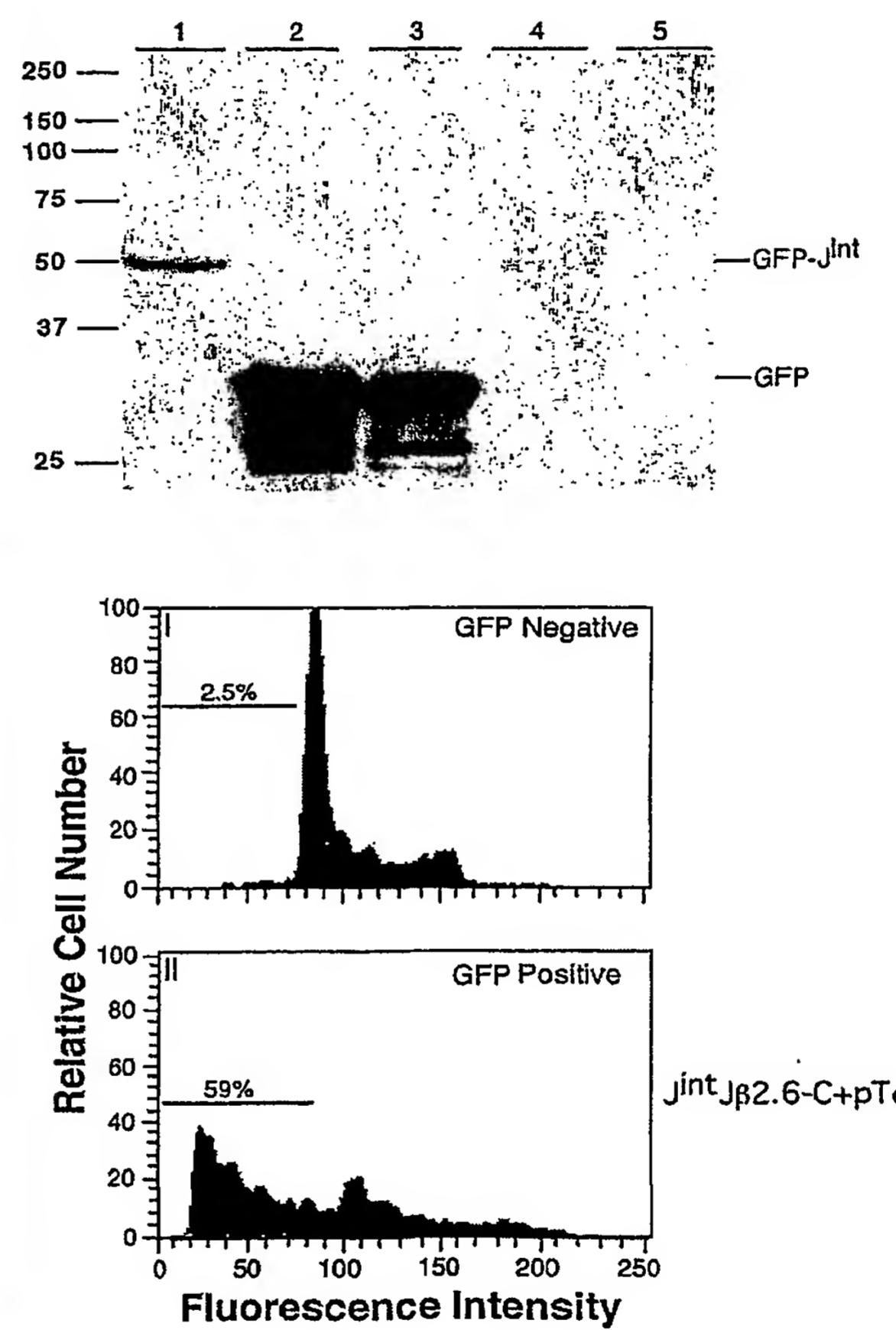


Figure 13C

Figure 14

